

Weekly Report

Research & Readings

1. Sizing the Horizon: The Effects of Chart Size and Layering on the Graphical Perception of Time Series Visualizations

A quick scan: A normal line chart is divided into bands defined by uniform value ranges. The bands are then layered to reduce the chart height.

2. Visualizing Incomplete and Partially Ranked Data

A quick scan: The paper focuses on permutation rating data, such as a rating of favorite movies or popular singers. It measures the similarity of two series of rating data (like 1|2|3|4 and 4|3|2|1) with Kendall's tau and extends it to incomplete data with-ties. MDS are used to reduce the dimensions of data to planar space. Heat-map is used to plot the data of rating action.

Such approach can be used to measure the similarity of Top-K of different timestamp.

3. A sample of Source IP--destination IP data is refined from 1.7G raw data. However only about 600 rows were extracted among more than 450,000 rows. No meaningful research can be done with such few data. Maybe we should focus on exploration of heterogeneous streaming data.

Project

Splunk (<http://www.splunk.com/>) is a powerful system/machine log management tools with advantages of easy configuration and rich forms of dashboards. The new project is about developing the function of log search.

A Flex version of timeline bar chart is developed by Fangzhou Guo and me for the log search aggregation, which helps visualizing the distribution of certain key words in system log. Log search function will be developed by Jackson's team and the two functions will be integrated together for further exploration of log search and key words distribution. The schedule table below records the developing plan.

project	timestamp	milestones	status
Log search	July 11 th	Splunk log search survey	Done
	July 12 th	Timeline bar chart design	Done
	July 13 th	Data updating animation effect of bar chart, parameter pass between web pages	Done
	July 16 th	Test with real data, other components	On Track

Study

None

Miscellaneous

None

Work to do next week

Help with real data testing of timeline bar chart.

More paper scanning on timeline data.